

WHAT IS CLAIMED IS

1. Device for feeding educts to parallel spaces separated from one another comprising a distributor unit, an outlet arrangement of the distributor unit operatively assigned to the parallel spaces, and evaporator structures for the evaporation of liquid media provided in the spaces, wherein the outlet arrangement projects into the spaces, and, at each point of the distributor unit, a boiling point T_s of the liquid medium is above an actual temperature of the medium in the distributor unit.

2. Device according to claim 1, wherein the distributor unit is configured in such that flow resistance or pressure loss in the distributor unit varies as a function of a temperature profile along the distributor unit.

3. Device according to claim 1, wherein the distributor and is configured such that flow resistance or pressure loss therein rises in proportion to the temperature of the distributor unit.

4. Device according to Claim 1, wherein at least a last stage of the distributor has a flow resistance sufficiently high that the boiling point in the respective outlet arrangement is higher than an ambient temperature of the outlet arrangement in the respective parallel space.

5. Device according to claim 1, wherein the distribution unit is configured such that the boiling point of the medium is

highest at the hottest point of the distributor unit.

6. Device according to claim 1, wherein the distributor unit is configured to be thermally uncoupled in relation to the spaces, at least in a region of the outlet arrangement means.

7. Device according to claim 1, wherein the distributor unit is configured to be cooled in relation to the spaces, at least in a region of the outlet arrangement.

8. Device according to claim 1, wherein the distributor unit is configured such that the liquid medium is feedable to a plurality of spaces via a common feed unit.

9. Device according to claim 1, wherein the distributor unit comprises at least one distributor stage, via which the liquid medium is distributable into the spaces from a common feed unit.

10. Device according to claim 1, wherein distributor unit is configured such that the flow resistance of a last stage thereof is higher by at least a factor of three than a flow resistance of the distributor unit upstream of the last stage.

11. Device according to claim 4, wherein the distributor unit is configured such that the flow resistance between different outlets of the last stage deviates by at most almost 20% from an average value of the flow resistance of the outlet

arrangement.

12. Device according to claim 4, wherein to generate the higher flow resistance, the distributor unit includes structure effecting a pressure loss, which structures is selected from at least one of the capillaries, ducts meaning structures and sintered porous materials.

13. Device according to claim 1, wherein the distributor unit is configured such that flow resistance is higher in the outlet means than in downstream spaces of the device.

14. Device according to claim 1, wherein the distributor unit is configured such that thermally insulating structure is arranged at least regionally around the distributor unit.

15. Device according to claim 1, wherein the spaces are formed by at least one tube, with one outlet of the outlet arrangement arranged to project into a respective tube.

16. Use of the device according to claim 1 as a plate reactor.

17. Use of the device according to Claim 1 as an evaporator having a plate-like construction.

18. Use of the device according to claim 1 in a fuel-cell system.